THE CLAIMS

What is claimed is:

1. A propellant free buccal spray composition for transmucosal administration of a pharmacologically active compound comprising:

an active compound in an amount of between 0.001 and 60 percent by weight of the total composition selected from the group consisting of acetylcholinesterase inhibitors, nerve impulse inhibitors, anti-cholinergics, anti-convulsants, anti-psychotics, anxiolytic agents, dopamine metabolism inhibitors, agents to treat post stroke sequelae, neuroprotectants, agents to treat Alzheimer's disease, neurotransmitters, neurotransmitter agonists, sedatives, agents for treating attention deficit disorder, agents for treating narcolepsy, central adregenic antagonists, anti-depression agents, agents for treating Parkinson's disease, benzodiazepine antagonists, stimulants, neurotransmitter antagonists, tranquilizers, and mixtures thereof; and

a polar solvent in an amount between 30 and 99 percent by weight of the total composition.

2. The composition of claim 1, further comprising a flavoring agent in an amount of between 0.1 and 10 percent by weight of the total composition.

3. The composition of claim 2, wherein the polar solvent is present in an amount between 37 and 98 percent by weight of the total composition, the active compound is present in an amount between 0.005 and 55 percent by weight of the total composition, and the flavoring agent is present in an amount between 0.5 and 8 percent by weight of the total composition.

4. The composition of claim 3, wherein the polar solvent is present in an amount between 60 and 97 percent by weight of the total composition, the active compound is present in an amount between 0.01 and 40 percent by weight of the total composition, and the flavoring agent is present in an amount between 0.75 and 7.5 percent by weight of the total composition.

5. The composition of claim 1, wherein the polar solvent is selected from the group consisting of polyethylene glycols having a molecular weight between 400 and 1000, C_2 to C_8 mono- and poly-alcohols, and C_7 to C_{18} alcohols of linear or branched configuration.

6. The composition of claim 1, wherein the polar solvent comprises aqueous polyethylene glycol.

7. The composition of claim 1, wherein the polar solvent comprises aqueous ethanol.

8. The composition of claim 1, wherein the active compound is an acetylcholinesterase inhibitors selected from the group consisting of galantamine, neostigmine, physostigmine, and edrophonium, and mixtures thereof.

9. The composition of claim 1, wherein the active compound is a nerve impulse inhibitor selected from the group consisting of levobupivacaine, lidocaine, prilocaine, mepivacaine, propofol, rapacuronium bromide, ropivacaine, tubocurarine, atracurium, doxaurium, mivacurium, pancuronium, vercuronium, pipecuronium, rocuronium, and mixtures thereof.

10. The composition of claim 1, wherein the active compound is an anti-cholinergic selected from the group consisting of amantadine, ipratropium, oxitropium, dicycloverine, and mixtures thereof.

11. The composition of claim 1, wherein the active compound is an anti-convulsant selected from the group consisting of acetazolamide, carbamazepine, clonazepam, diazepam, divalproex, ethosuximide, lamotrignine acid, levetriacetam, oxcarbazepine, phenobarbital, phenytoin, pregabalin, primidone, remacemide, trimethadione, topiramate, vigabatrin, zonisamide, and mixtures thereof.

12. The composition of claim 1, wherein the active compound is an anti-psychotic selected from the group consisting of amisulpride, aripiprazole bifemelane,

bromperidol, clozapine, chlorpromazine, haloperidol, iloperidone loperidone, olanzapine, quetiapine, fluphenazine, fumarate, risperidone, thiothixene, thioridazine, sulpride, ziprasidone, and mixtures thereof.

13. The composition of claim 1, wherein the active compound is an anxiolytic agent selected from the group consisting of amitryptiline, atracurium, buspirone, chlorzoxazone, clorazepate, cisatracurium, cyclobenzaprine, eperisone, esopiclone, hydroxyzine, mirtazapine, mivacurium, pagoclone, sulperide, zaleplon, zopiclone, and mixtures thereof.

14. The composition of claim 1, wherein the active compound is a dopamine metabolism inhibitor selected from the group consisting of entacapone, lazebemide, selegiline, tolcapone, and mixtures thereof.

15. The composition of claim 1, wherein the active compound is an agent to treat post stroke sequelae selected from the group consisting of glatiramer, interferon beta 1A, interferon beta 1B, estradiol, progesterone, and mixtures thereof.

16. The composition of claim 1, wherein the active compound is a neuroprotectant selected from the group consisting of donepezil, memanine, nimodipine, riluzole, rivastigmine, tacrine, TAK147, xaliproden, and mixtures thereof.

17. The composition of claim 1, wherein the active compound is an agent to treat Alzheimer's disease selected from the group consisting of carbidopa, levodopa, tacrine, donezepil, rivastigmine, galantamine, and mixtures thereof.

18. The composition of claim 1, wherein the active compound is a neurotransmitter selected from the group consisting of acetylcholine, serotonin, 5-hydroxytryptamine (5-HT), GABA, glutamate, aspartate, glycine, histamine, epinephrine, norpinephrine, dopamine, adenosine, ATP, nitric oxide, and mixtures thereof.

19. The composition of claim 1, wherein the active compound is a neurotransmitter agonist selected from the group consisting of almotriptan, aniracetam,

atomoxetine, benserazide, bromocriptine, bupropion, cabergoline, citalopram, clomipramine, desipramine, diazepam, dihydroergotamine, doxepin duloxetine, eletriptan, escitalopram, fluvoxamine, gabapentin, imipramine, moclobemide, naratriptan, nefazodone, nefiracetam acamprosate, nicergoline, nortryptiline, paroxetine, pergolide, pramipexole, rizatriptan, ropinirole, sertraline, sibutramine, sumatriptan, tiagabine, trazodone, venlafaxine, zolmitriptan, and mixtures thereof.

20. The composition of claim 1, wherein the active compound is a sedative selected from the group consisting of dexmedetomidine, eszopiclone, indiplon, zolpidem, zaleplon, and mixtures thereof.

21. The composition of claim 1, wherein the active compound is an agent for treating attention deficit disorder selected from the group consisting of amphetamine, dextroamphetamine, methylphenidate, pemoline, and mixtures thereof.

22. The composition of claim 1, wherein the active compound is an agent for treating narcolepsy selected from the group consisting of modafinil, mazindol, and mixtures thereof.

23. The composition of claim 1, wherein the active compound is an anti-depression agent selected from the group consisting of amitriptyline, amoxapine, bupropion, clomipramine, clomipramine, clorgyline, desipramine, doxepin, fluoxetine, imipramine, isocarboxazid, maprotiline, mirtazapine, nefazodone, nortriptyline, paroxetine, phenelzine, protriptyline, sertraline, tranylcypromine, trazodone, venlafaxine, and mixtures thereof.

24. The composition of claim 1, wherein the active compound is an agent for treating Parkinson's disease selected from the group consisting of amantadine, bromocriptine, carvidopa, levodopa, pergolide, selegiline, and mixtures thereof.

25. The composition of claim 1, wherein the active compound is the benzodiazepine antagonist flumazenil.

26. The composition of claim 1, wherein the active compound is the neurotransmitter antagonist deramciclane.

27. The composition of claim 1, wherein the active compound is a stimulant selected from the group consisting of amphetamine, dextroamphetamine, dinoprostone, methylphenidate, methylphenidate, modafinil, pemoline, and mixtures thereof.

28. The composition of claim 1, wherein the active compound is the tranquilizer mesoridazine.

29. The composition of claim 2, wherein the flavoring agent is selected from the group consisting of synthetic or natural oil of peppermint, oil of spearmint, citrus oil, fruit flavors, sweeteners, and mixtures thereof.

30. A method of administering a pharmacologically active compound to a mammal comprising spraying the oral mucosa of the mammal with the composition of claim 1.

31. The method of claim 30, wherein the amount of the spray is predetermined.

32. A buccal spray composition for transmucosal administration of a pharmacologically active compound comprising:

an active compound in an amount of between 0.1 and 25 percent by weight of the total composition selected from the group consisting of consisting of acetylcholinesterase inhibitors, nerve impulse inhibitors, anti-cholinergics, anti-convulsants, anti-psychotics, anxiolytic agents, dopamine metabolism inhibitors, agents to treat post stroke sequelae, neuroprotectants, agents to treat Alzheimer's disease, neurotransmitters, neurotransmitter agonists, sedatives, agents for treating attention deficit disorder, agents for treating narcolepsy, central adregenic antagonists, anti-depression agents, agents for treating Parkinson's disease, benzodiazepine antagonists, stimulants, neurotransmitter antagonists, tranquilizers, and mixtures thereof;

a polar solvent in an amount between 10 and 97 percent by weight of the total composition; and

a propellant in an amount between 2 and 10 percent by weight of the total composition, wherein said propellant is a C_3 to C_8 hydrocarbon of linear or branched configuration.

33. The composition of claim 32, further comprising a flavoring agent in an amount between 0.05 and 10 percent by weight of the total composition.

34. The composition of claim 33, wherein the polar solvent is present in an amount between 20 and 97 percent by weight of the total composition, the active compound is present in an amount between 0.1 and 15 percent by weight of the total composition, the propellant is present in an amount between 2 and 5 percent by weight of the composition, and the flavoring agent is present in an amount between 0.1 and 5 percent by weight of the total composition.

35. The composition of claim 34, wherein the polar solvent is present in an amount between 25 and 97 percent by weight of the total composition, the active compound is present in an amount between 0.2 and 25 percent by weight of the total composition, the propellant is present in an amount between 2 and 4 percent by weight of the composition, and flavoring agent is present in an amount between 0.1 and 2.5 percent by weight of the total composition.

36. The composition of claim 32, wherein the polar solvent is selected from the group consisting of polyethyleneglycols having a molecular weight between 400 and 1000, C_2 to C_8 mono- and poly-alcohols, and C_7 to C_{18} alcohols of linear or branched configuration.

37. The composition of claim 36, wherein the polar solvent comprises aqueous polyethylene glycol.

38. The composition of claim 36, wherein the polar solvent comprises aqueous ethanol.

39. The composition of claim 32, wherein the active compound is an acetylcholinesterase inhibitors selected from the group consisting of galantamine, neostigmine, physostigmine, and edrophonium, and mixtures thereof.

40. The composition of claim 32, wherein the active compound is a nerve impulse inhibitor selected from the group consisting of levobupivacaine, lidocaine, prilocaine, mepivacaine, propofol, rapacuronium bromide, ropivacaine, tubocurarine, atracurium, doxaurium, mivacurium, pancuronium, vercuronium, pipecuronium, rocuronium, and mixtures thereof.

41. The composition of claim 32, wherein the active compound is an anti-cholinergic selected from the group consisting of amantadine, ipratropium, oxitropium, dicycloverine, and mixtures thereof.

42. The composition of claim 32, wherein the active compound is an anti-convulsant selected from the group consisting of acetazolamide, carbamazepine, clonazepam, diazepam, divalproex, ethosuximide, lamotrignine acid, levetriacetam, oxcarbazepine, phenobarbital, phenytoin, pregabalin, primidone, remacemide, trimethadione, topiramate, vigabatrin, zonisamide, and mixtures thereof.

43. The composition of claim 32, wherein the active compound is an anti-psychotic selected from the group consisting of amisulpride, aripiprazole bifemelane, bromperidol, clozapine, chlorpromazine, haloperidol, iloperidone loperidone, olanzapine, quetiapine, fluphenazine, fumarate, risperidone, thiothixene, thioridazine, sulpride, ziprasidone, and mixtures thereof.

44. The composition of claim 32, wherein the active compound is an anxiolytic agent selected from the group consisting of amitryptiline, atracurium, buspirone, chlorzoxazone, clorazepate, cisatracurium, cyclobenzaprine, eperisone, esopiclone, hydroxyzine, mirtazapine, mivacurium, pagoclone, sulperide, zaleplon, zopiclone, and mixtures thereof.

45. The composition of claim 32, wherein the active compound is a dopamine metabolism inhibitor selected from the group consisting of entacapone, lazebemide, selegiline, tolcapone, and mixtures thereof.

46. The composition of claim 32, wherein the active compound is an agent to treat post stroke sequelae selected from the group consisting of glatiramer, interferon beta 1A, interferon beta 1B, estradiol, progesterone, and mixtures thereof.

47. The composition of claim 32, wherein the active compound is a neuroprotectant selected from the group consisting of donepezil, memanine, nimodipine, riluzole, rivastigmine, tacrine, TAK147, xaliproden, and mixtures thereof.

48. The composition of claim 32, wherein the active compound is an agent to treat Alzheimer's disease selected from the group consisting of carbidopa, levodopa, tacrine, donezepil, rivastigmine, galantamine, and mixtures thereof.

49. The composition of claim 32, wherein the active compound is a neurotransmitter selected from the group consisting of acetylcholine, serotonin, 5-hydroxytryptamine (5-HT), GABA, glutamate, aspartate, glycine, histamine, epinephrine, norpinephrine, dopamine, adenosine, ATP, nitric oxide, and mixtures thereof.

50. The composition of claim 32, wherein the active compound is a neurotransmitter agonist selected from the group consisting of almotriptan, aniracetam, atomoxetine, benserazide, bromocriptine, bupropion, cabergoline, citalopram, clomipramine, desipramine, diazepam, dihydroergotamine, doxepin duloxetine, eletriptan, escitalopram, fluvoxamine, gabapentin, imipramine, moclobemide, naratriptan, nefazodone, nefiracetam acamprosate, nicergoline, nortryptiline, paroxetine, pergolide, pramipexole, rizatriptan, ropinirole, sertraline, sibutramine, sumatriptan, tiagabine, trazodone, venlafaxine, zolmitriptan, and mixtures thereof.

51. The composition of claim 32, wherein the active compound is a sedative selected from the group consisting of dexmedetomidine, eszopiclone, indiplon, zolpidem, zaleplon, and mixtures thereof.

52. The composition of claim 32, wherein the active compound is an agent for treating attention deficit disorder selected from the group consisting of amphetamine, dextroamphetamine, methylphenidate, pemoline, and mixtures thereof.

53. The composition of claim 32, wherein the active compound is an agent for treating narcolepsy selected from the group consisting of modafinil, mazindol, and mixtures thereof.

54. The composition of claim 32, wherein the active compound is an anti-depression agent selected from the group consisting of amitriptyline, amoxapine, bupropion, clomipramine, clomipramine, clorgyline, desipramine, doxepin, fluoxetine, imipramine, isocarboxazid, maprotiline, mirtazapine, nefazodone, nortriptyline, paroxetine, phenelzine, protriptyline, sertraline, tranylcypromine, trazodone, venlafaxine, and mixtures thereof.

55. The composition of claim 32, wherein the active compound is an agent for treating Parkinson's disease selected from the group consisting of amantadine, bromocriptine, carvidopa, levodopa, pergolide, selegiline, and mixtures thereof.

56. The composition of claim 32, wherein the active compound is the benzodiazepine antagonist flumazenil.

57. The composition of claim 32, wherein the active compound is the neurotransmitter antagonist deramciclane.

58. The composition of claim 32, wherein the active compound is a stimulant selected from the group consisting of amphetamine, dextroamphetamine, dinoprostone, methylphenidate, methylphenidate, modafinil, pemoline, and mixtures thereof.

59. The composition of claim 32, wherein the active compound is the tranquilizer mesoridazine.

60. The composition of claim 32, wherein the flavoring agent is selected from the group consisting of synthetic or natural oil of peppermint, oil of spearmint, citrus oil, fruit flavors, sweeteners, and mixtures thereof.

61. The composition of claim 32, wherein the propellant is selected from the group consisting of propane, *N*-butane, *iso*-butane, *N*-pentane, *iso*-pentane, *neo*-pentane, and mixtures thereof.

62. A method of administering a pharmacologically active compound to a mammal comprising spraying the oral mucosa of the mammal with the composition of claim 32.

63. The method of claim 62, wherein the amount of the spray is predetermined.

64. A propellant free buccal spray composition for transmucosal administration of a pharmacologically active compound comprising:

an active compound in an amount between 0.005 and 55 percent by weight of the total composition selected from the group consisting of acetylcholinesterase inhibitors, nerve impulse inhibitors, anti-cholinergics, anti-convulsants, anti-psychotics, anxiolytic agents, dopamine metabolism inhibitors, agents to treat post stroke sequelae, neuroprotectants, agents to treat Alzheimer's disease, neurotransmitters, neurotransmitter agonists, sedatives, agents for treating attention deficit disorder, agents for treating narcolepsy, central adregenic antagonists, anti-depression agents, agents for treating Parkinson's disease, benzodiazepine antagonists, stimulants, neurotransmitter antagonists, tranquilizers, and mixtures thereof; and

a non-polar solvent in an amount between 30 and 99 percent by weight of the total composition.

65. The composition of claim 64, further comprising a flavoring agent in an amount between 0.1 and 10 percent by weight of the total composition.

66. The composition of claim 64, wherein the active compound is an acetylcholinesterase inhibitors selected from the group consisting of galantamine, neostigmine, physostigmine, and edrophonium, and mixtures thereof.

67. The composition of claim 64, wherein the active compound is a nerve impulse inhibitor selected from the group consisting of levobupivacaine, lidocaine, prilocaine, mepivacaine, propofol, rapacuronium bromide, ropivacaine, tubocurarine, atracurium, doxaurium, mivacurium, pancuronium, vercuronium, pipecuronium, rocuronium, and mixtures thereof.

68. The composition of claim 64, wherein the active compound is an anti-cholinergic selected from the group consisting of amantadine, ipratropium, oxitropium, dicycloverine, and mixtures thereof.

69. The composition of claim 64, wherein the active compound is an anti-convulsant selected from the group consisting of acetazolamide, carbamazepine, clonazepam, diazepam, divalproex, ethosuximide, lamotrignine acid, levetriacetam, oxcarbazepine, phenobarbital, phenytoin, pregabalin, primidone, remacemide, trimethadione, topiramate, vigabatrin, zonisamide, and mixtures thereof.

70. The composition of claim 64, wherein the active compound is an anti-psychotic selected from the group consisting of amisulpride, aripiprazole bifemelane, bromperidol, clozapine, chlorpromazine, haloperidol, iloperidone loperidone, olanzapine, quetiapine, fluphenazine, fumarate, risperidone, thiothixene, thioridazine, sulpride, ziprasidone, and mixtures thereof.

71. The composition of claim 64, wherein the active compound is an anxiolytic agent selected from the group consisting of amitryptiline, atracurium, buspirone, chlorzoxazone, clorazepate, cisatracurium, cyclobenzaprine, eperisone, esopiclone, hydroxyzine, mirtazapine, mivacurium, pagoclone, sulperide, zaleplon, zopiclone, and mixtures thereof.

72. The composition of claim 64, wherein the active compound is a dopamine metabolism inhibitor selected from the group consisting of entacapone, lazebemide, selegiline, tolcapone, and mixtures thereof.

73. The composition of claim 64, wherein the active compound is an agent to treat post stroke sequelae selected from the group consisting of glatiramer, interferon beta 1A, interferon beta 1B, estradiol, progesterone, and mixtures thereof.

74. The composition of claim 64, wherein the active compound is a neuroprotectant selected from the group consisting of donepezil, memanine, nimodipine, riluzole, rivastigmine, tacrine, TAK147, xaliproden, and mixtures thereof.

75. The composition of claim 64, wherein the active compound is an agent to treat Alzheimer's disease selected from the group consisting of carbidopa, levodopa, tacrine, donezepil, rivastigmine, galantamine, and mixtures thereof.

76. The composition of claim 64, wherein the active compound is a neurotransmitter selected from the group consisting of acetylcholine, serotonin, 5-hydroxytryptamine (5-HT), GABA, glutamate, aspartate, glycine, histamine, epinephrine, norpinephrine, dopamine, adenosine, ATP, nitric oxide, and mixtures thereof.

77. The composition of claim 64, wherein the active compound is a neurotransmitter agonist selected from the group consisting of almotriptan, aniracetam, atomoxetine, benserazide, bromocriptine, bupropion, cabergoline, citalopram, clomipramine, desipramine, diazepam, dihydroergotamine, doxepin duloxetine, eletriptan, escitalopram, fluvoxamine, gabapentin, imipramine, moclobemide, naratriptan, nefazodone, nefiracetam acamprosate, nicergoline, nortryptiline, paroxetine, pergolide, pramipexole, rizatriptan, ropinirole, sertraline, sibutramine, sumatriptan, tiagabine, trazodone, venlafaxine, zolmitriptan, and mixtures thereof.

78. The composition of claim 64, wherein the active compound is a sedative selected from the group consisting of dexmedetomidine, eszopiclone, indiplon, zolpidem, zaleplon, and mixtures thereof.

79. The composition of claim 64, wherein the active compound is an agent for treating attention deficit disorder selected from the group consisting of amphetamine, dextroamphetamine, methylphenidate, pemoline, and mixtures thereof.

80. The composition of claim 64, wherein the active compound is an agent for treating narcolepsy selected from the group consisting of modafinil, mazindol, and mixtures thereof.

81. The composition of claim 64, wherein the active compound is an anti-depression agent selected from the group consisting of amitriptyline, amoxapine, bupropion, clomipramine, clomipramine, clorgyline, desipramine, doxepin, fluoxetine, imipramine, isocarboxazid, maprotiline, mirtazapine, nefazodone, nortriptyline, paroxetine, phenelzine, protriptyline, sertraline, tranylcypromine, trazodone, venlafaxine, and mixtures thereof.

82. The composition of claim 64, wherein the active compound is an agent for treating Parkinson's disease selected from the group consisting of amantadine, bromocriptine, carvidopa, levodopa, pergolide, selegiline, and mixtures thereof.

83. The composition of claim 64, wherein the active compound is the benzodiazepine antagonist flumazenil.

84. The composition of claim 64, wherein the active compound is the neurotransmitter antagonist deramciclane.

85. The composition of claim 64, wherein the active compound is a stimulant selected from the group consisting of amphetamine, dextroamphetamine, dinoprostone, methylphenidate, methylphenidate, modafinil, pemoline, and mixtures thereof.

86. The composition of claim 64, wherein the active compound is the tranquilizer mesoridazine.

87. The composition of claim 65, wherein the flavoring agent is selected from the group consisting of synthetic or natural oil of peppermint, oil of spearmint, citrus oil, fruit flavors, sweeteners, and mixtures thereof.

88. The composition of claim 64, wherein the solvent is selected from the group consisting of (C_2-C_{24}) fatty acid (C_2-C_6) esters, C_7-C_{18} hydrocarbons of linear or branched configuration, C_2-C_6 alkanoyl esters, and triglycerides of C_2-C_6 carboxylic acids.

89. The composition of claim 88, wherein the solvent is miglyol.

90. A method of administering a pharmacologically active compound to a mammal comprising spraying the oral mucosa of the mammal with the composition of claim 64.

91. The method of claim 90, wherein the amount of the spray is predetermined.

92. A buccal spray composition for transmucosal administration of a pharmacologically active compound comprising:

an active compound in an amount between 0.05 and 50 percent by weight of the total composition selected from the group consisting of acetylcholinesterase inhibitors, nerve impulse inhibitors, anti-cholinergics, anti-convulsants, anti-psychotics, anxiolytic agents, dopamine metabolism inhibitors, agents to treat post stroke sequelae, neuroprotectants, agents to treat Alzheimer's disease, neurotransmitters, neurotransmitter agonists, sedatives, agents for treating attention deficit disorder, agents for treating narcolepsy, central adregenic antagonists, anti-depression agents, agents for treating Parkinson's disease, benzodiazepine antagonists, stimulants, neurotransmitter antagonists, tranquilizers, and mixtures thereof; and

a non-polar solvent in an amount between 19 and 85 percent by weight of the total composition; and

a propellant in an amount between 5 and 80 percent by weight of the total composition, wherein said propellant is a C_3 to C_8 hydrocarbon of linear or brancehed configuration.

93. The composition of claim 92, further comprising a flavoring agent in an amount of between 0.1 and 10 percent by weight of the total composition.

94. The composition of claim 93, wherein the flavoring agent is selected from the group consisting of synthetic or natural oil of peppermint, oil of spearmint, citrus oil, fruit flavors, sweeteners, and mixtures thereof.

95. A buccal spray composition for transmucosal administration of a pharmacologically active compound comprising:

an active compound in an amount between 0.01 and 40 percent by weight of the total composition selected from the group consisting of acetylcholinesterase inhibitors, nerve impulse inhibitors, anti-cholinergics, anti-convulsants, anti-psychotics, anxiolytic agents, dopamine metabolism inhibitors, agents to treat post stroke sequelae, neuroprotectants, agents to treat Alzheimer's disease, neurotransmitters, neurotransmitter agonists, sedatives, agents for treating attention deficit disorder, agents for treating narcolepsy, central adregenic antagonists, anti-depression agents, agents for treating Parkinson's disease, benzodiazepine antagonists, stimulants, neurotransmitter antagonists, tranquilizers, and mixtures thereof; and

a non-polar solvent in an amount between 25 and 89 percent by weight of the total composition;

a propellant in an amount between 10 and 70 percent by weight of the total composition, wherein said propellant is a C_3 to C_8 hydrocarbon of linear or brancehed configuration; and

A flavoring agent is present in an amount between 1 and 8 percent by weight of the total composition.

96. The composition of claim 95, wherein the propellant is present in an amount between 20 and 70 percent by weight of the total composition, the non-polar solvent is present in an amount between 25 and 75 percent by weight of the total composition, the active compound is present in an amount from between 0.25 and 35 percent by weight of the total composition, and the flavoring agent is present in an amount between 2 and 7.5 percent by weight of the total composition.

97. The composition of claim 92, wherein the propellant is selected from the group consisting of propane, *n*-butane, *iso*-butane, *n*-pantane, *iso*-pentane, *neo*-pentane, and mixtures thereof.

98. The composition of claim 97, wherein the propellant is *n*-butane or *iso*-butane and has a water content of not more than 0.2 percent and a concentration of oxidizing agents, reducing agents, Lewis acids, and Lewis bases of less than 0.1 percent.

99. The composition of claim 92, wherein the solvent is selected from the group consisting of (C_2-C_{24}) fatty acid (C_2-C_6) esters, C_7-C_{18} hydrocarbons of linear or branched configuration, C_2-C_6 alkanoyl esters, and triglycerides of C_2-C_6 carboxylic acids.

100. The composition of claim 99, wherein the solvent is miglyol.

101. The composition of claim 92, wherein the active compound is an acetylcholinesterase inhibitors selected from the group consisting of galantamine, neostigmine, physostigmine, and edrophonium, and mixtures thereof.

102. The composition of claim 92, wherein the active compound is a nerve impulse inhibitor selected from the group consisting of levobupivacaine, lidocaine, prilocaine, mepivacaine, propofol, rapacuronium bromide, ropivacaine, tubocurarine, atracurium, doxaurium, mivacurium, pancuronium, vercuronium, pipecuronium, rocuronium, and mixtures thereof.

103. The composition of claim 92, wherein the active compound is an anti-cholinergic selected from the group consisting of amantadine, ipratropium, oxitropium, dicycloverine, and mixtures thereof.

104. The composition of claim 92, wherein the active compound is an anti-convulsant selected from the group consisting of acetazolamide, carbamazepine, clonazepam, diazepam, divalproex, ethosuximide, lamotrignine acid, levetriacetam, oxcarbazepine, phenobarbital, phenytoin, pregabalin, primidone, remacemide, trimethadione, topiramate, vigabatrin, zonisamide, and mixtures thereof.

105. The composition of claim 92, wherein the active compound is an anti-psychotic selected from the group consisting of amisulpride, aripiprazole bifemelane, bromperidol, clozapine, chlorpromazine, haloperidol, iloperidone loperidone, olanzapine, quetiapine, fluphenazine, fumarate, risperidone, thiothixene, thioridazine, sulpride, ziprasidone, and mixtures thereof.

106. The composition of claim 92, wherein the active compound is an anxiolytic agent selected from the group consisting of amitryptiline, atracurium, buspirone, chlorzoxazone, clorazepate, cisatracurium, cyclobenzaprine, eperisone, esopiclone, hydroxyzine, mirtazapine, mivacurium, pagoclone, sulperide, zaleplon, zopiclone, and mixtures thereof.

107. The composition of claim 92, wherein the active compound is a dopamine metabolism inhibitor selected from the group consisting of entacapone, lazebemide, selegiline, tolcapone, and mixtures thereof.

108. The composition of claim 92, wherein the active compound is an agent to treat post stroke sequelae selected from the group consisting of glatiramer, interferon beta 1A, interferon beta 1B, estradiol, progesterone, and mixtures thereof.

109. The composition of claim 92, wherein the active compound is a neuroprotectant selected from the group consisting of donepezil, memanine, nimodipine, riluzole, rivastigmine, tacrine, TAK147, xaliproden, and mixtures thereof.

110. The composition of claim 92, wherein the active compound is an agent to treat Alzheimer's disease selected from the group consisting of carbidopa, levodopa, tacrine, donezepil, rivastigmine, galantamine, and mixtures thereof.

111. The composition of claim 92, wherein the active compound is a neurotransmitter selected from the group consisting of acetylcholine, serotonin, 5-hydroxytryptamine (5-HT), GABA, glutamate, aspartate, glycine, histamine, epinephrine, norpinephrine, dopamine, adenosine, ATP, nitric oxide, and mixtures thereof.

112. The composition of claim 92, wherein the active compound is a neurotransmitter agonist selected from the group consisting of almotriptan, aniracetam, atomoxetine, benserazide, bromocriptine, bupropion, cabergoline, citalopram, clomipramine, desipramine, diazepam, dihydroergotamine, doxepin duloxetine, eletriptan, escitalopram, fluvoxamine, gabapentin, imipramine, moclobemide, naratriptan, nefazodone, nefiracetam acamprosate, nicergoline, nortryptiline, paroxetine, pergolide, pramipexole, rizatriptan, ropinirole, sertraline, sibutramine, sumatriptan, tiagabine, trazodone, venlafaxine, zolmitriptan, and mixtures thereof.

113. The composition of claim 92, wherein the active compound is a sedative selected from the group consisting of dexmedetomidine, eszopiclone, indiplon, zolpidem, zaleplon, and mixtures thereof.

114. The composition of claim 92, wherein the active compound is an agent for treating attention deficit disorder selected from the group consisting of amphetamine, dextroamphetamine, methylphenidate, pemoline, and mixtures thereof.

115. The composition of claim 92, wherein the active compound is an agent for treating narcolepsy selected from the group consisting of modafinil, mazindol, and mixtures thereof.

116. The composition of claim 92, wherein the active compound is an anti-depression agent selected from the group consisting of amitriptyline, amoxapine, bupropion, clomipramine, clomipramine, clorgyline, desipramine, doxepin, fluoxetine, imipramine, isocarboxazid, maprotiline, mirtazapine, nefazodone, nortriptyline, paroxetine, phenelzine, protriptyline, sertraline, tranylcypromine, trazodone, venlafaxine, and mixtures thereof.

117. The composition of claim 92, wherein the active compound is an agent for treating Parkinson's disease selected from the group consisting of amantadine, bromocriptine, carvidopa, levodopa, pergolide, selegiline, and mixtures thereof.

118. The composition of claim 92, wherein the active compound is the benzodiazepine antagonist flumazenil.

119. The composition of claim 92, wherein the active compound is the neurotransmitter antagonist deramciclane.

120. The composition of claim 92, wherein the active compound is a stimulant selected from the group consisting of amphetamine, dextroamphetamine, dinoprostone, methylphenidate, methylphenidate, modafinil, pemoline, and mixtures thereof.

121. The composition of claim 92, wherein the active compound is the tranquilizer mesoridazine.

122. A method of administering a pharmacologically active compound to a mammal comprising spraying the oral mucosa of the mammal with the composition of claim 92.

123. The method of claim 122, wherein the amount of the spray is predetermined.